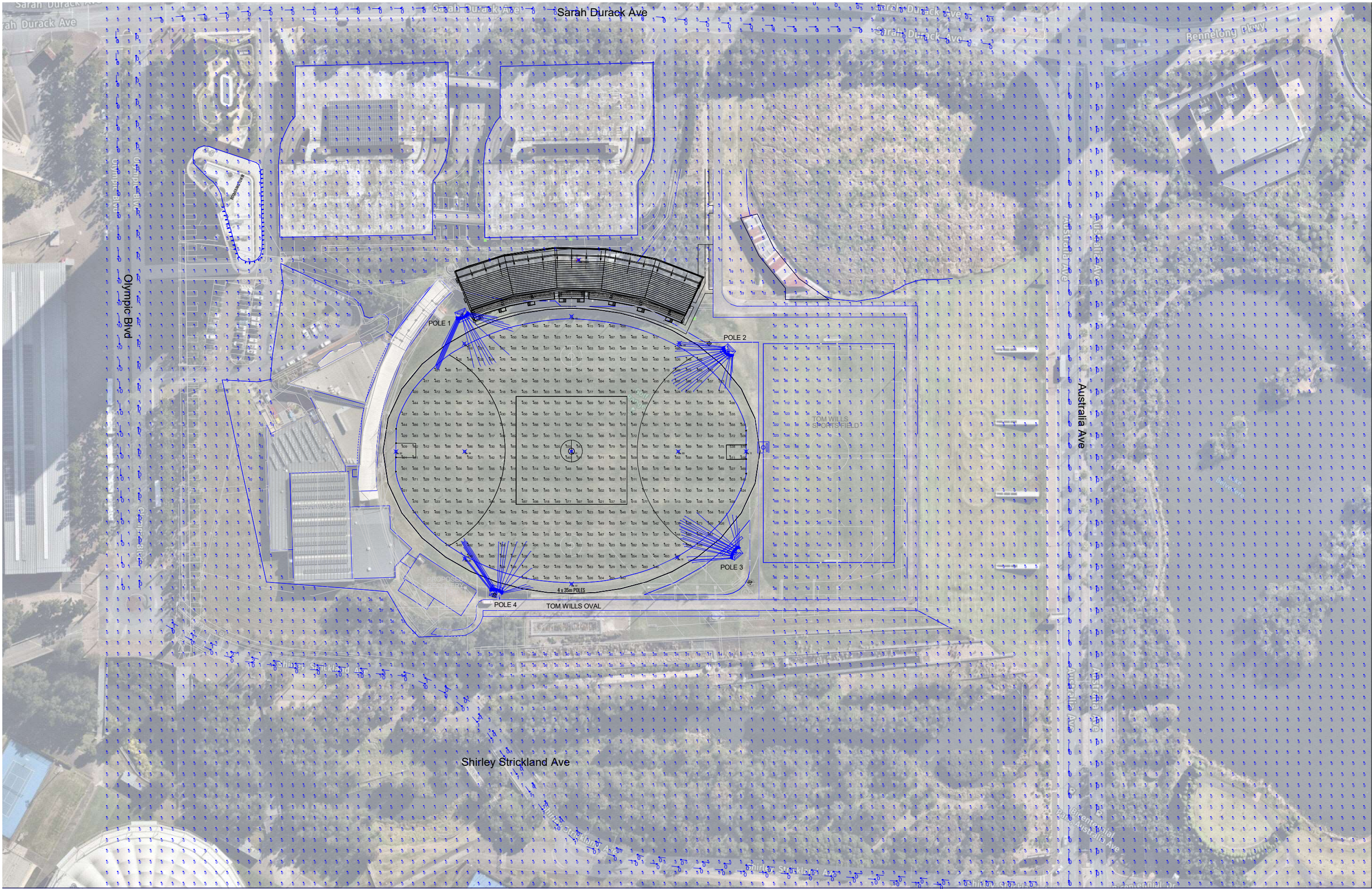




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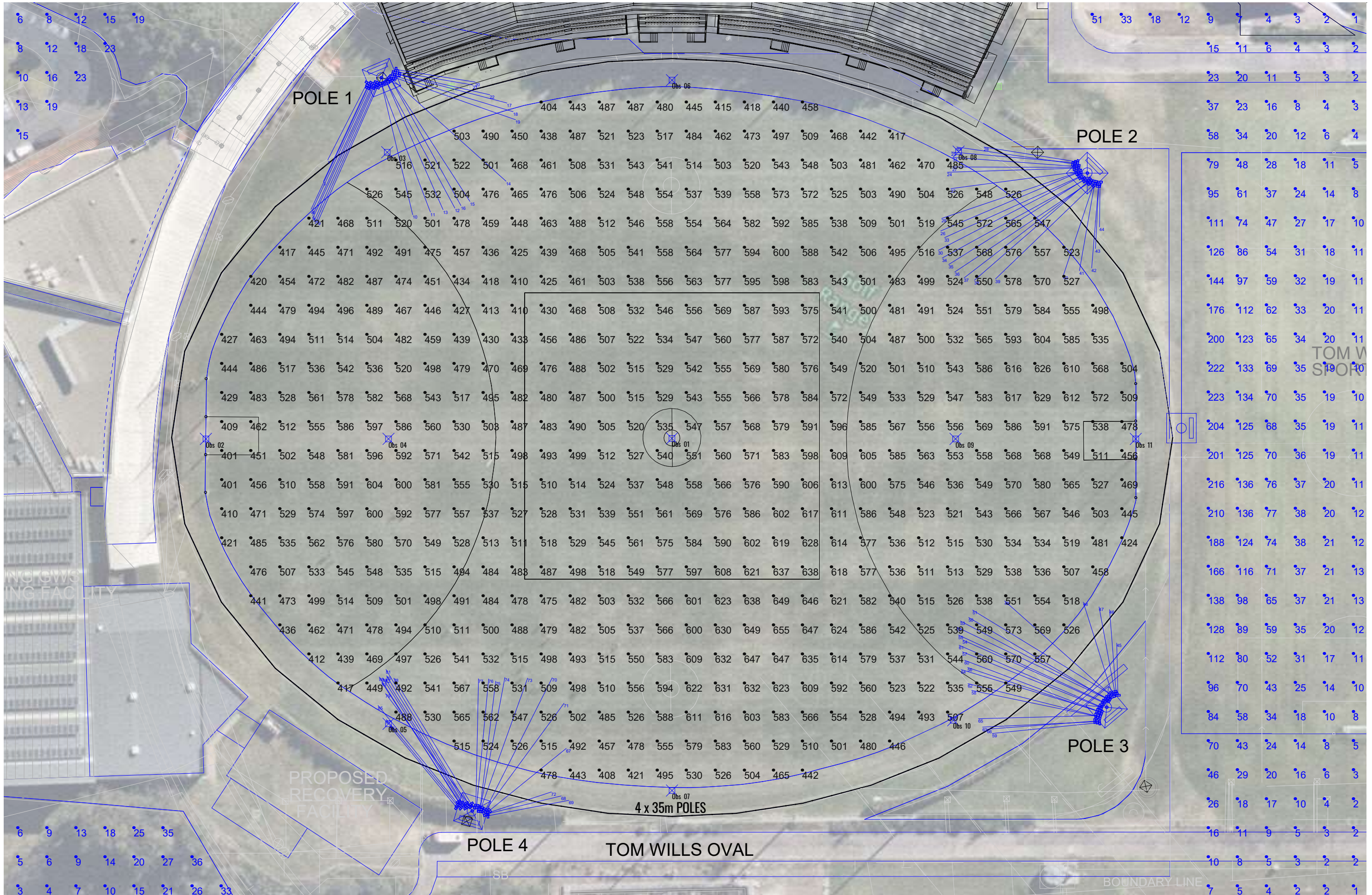
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PROJECT

TOM WILLS OVAL
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DESIGNED	GO	CHECKED	SHEET SIZE A3
DATE	5/09/2024	SCALE	
REVISION	REVISION 017.030A	Page 1 of 9	



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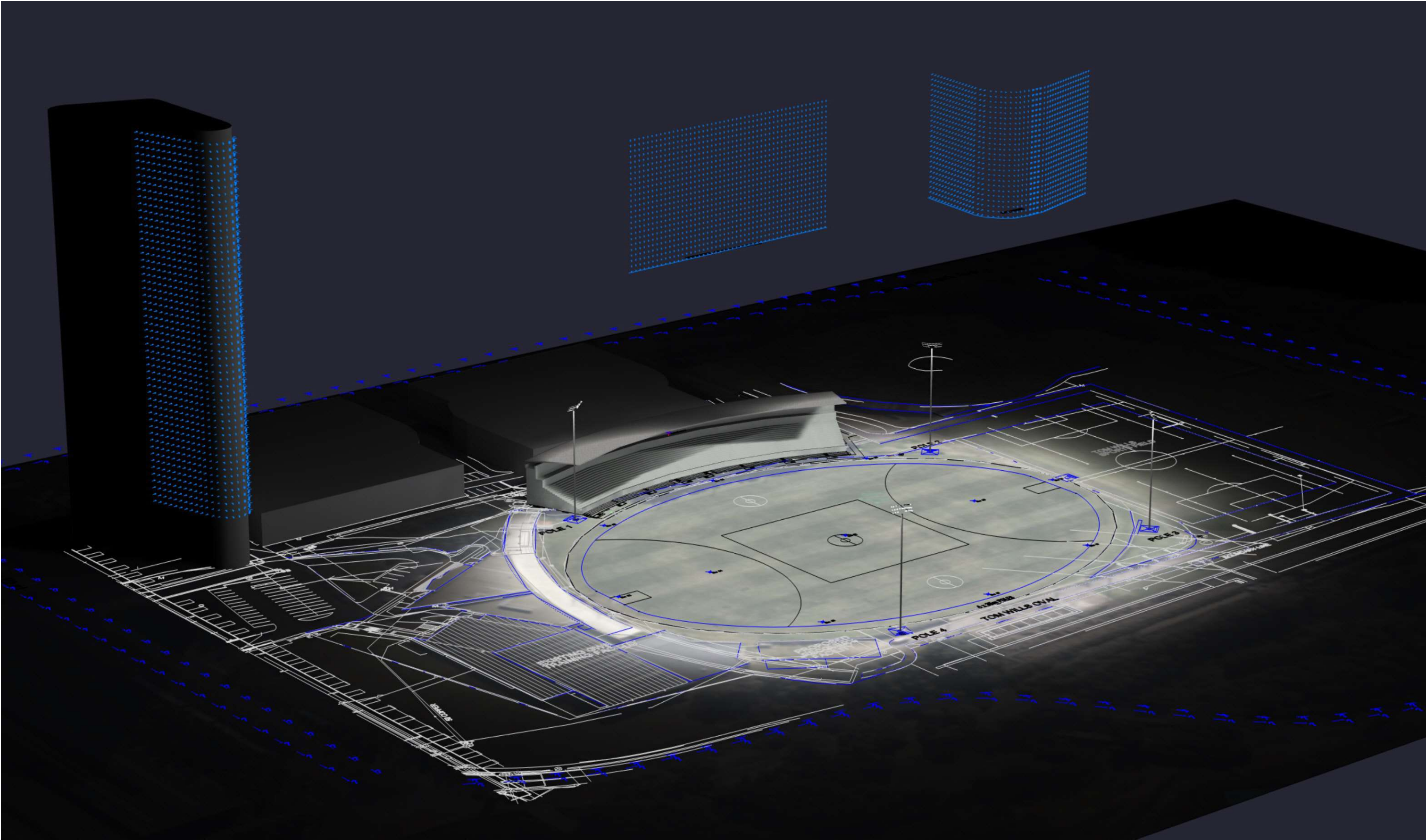
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PROJECT

TOM WILLS OVAL
500LX

DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE 1: 600
REVISION	REVISION 017.030A	Page 2 of 9

SHEET SIZE A3



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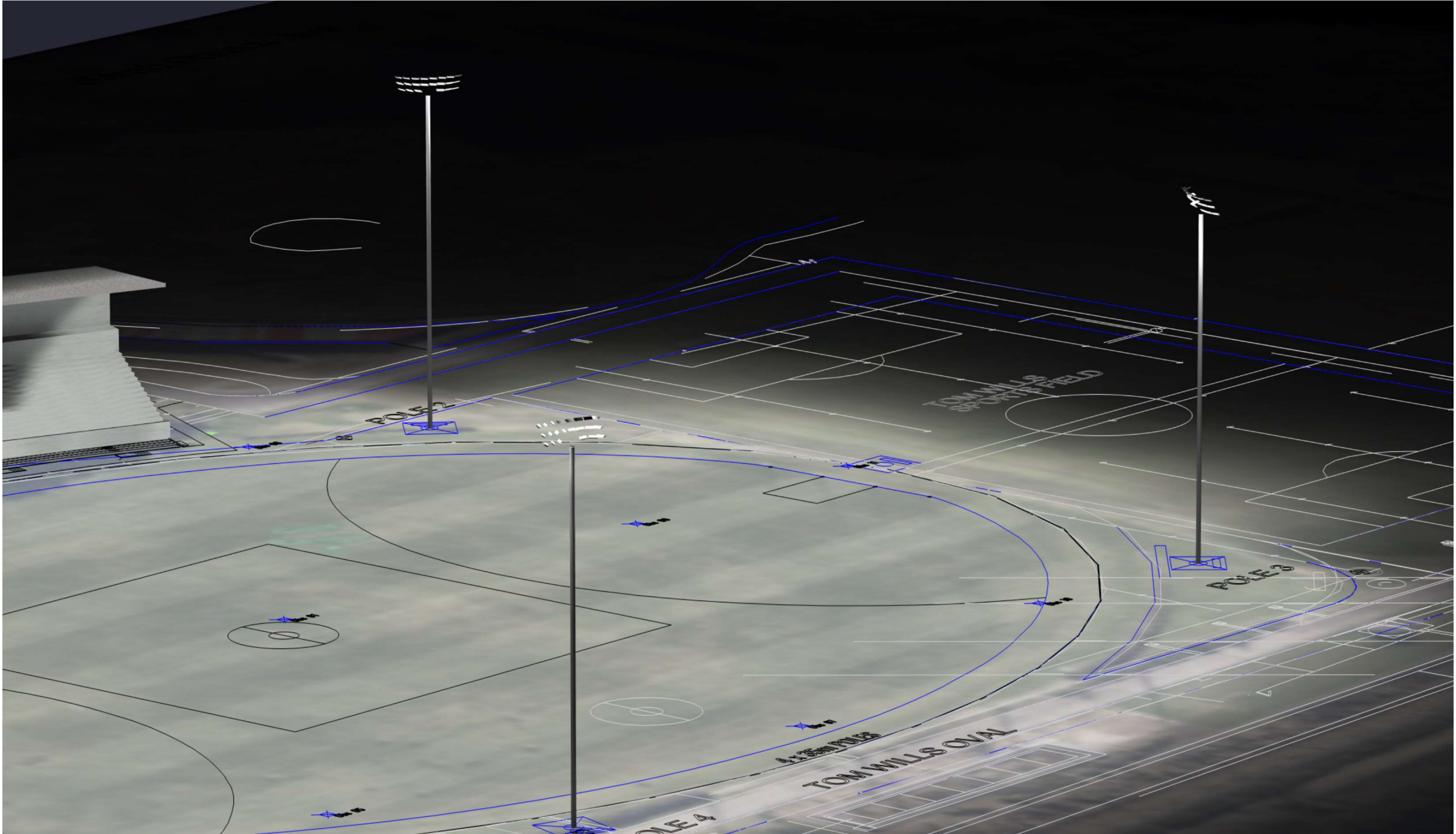


PROJECT

TOM WILLS OVAL
500LX

DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 3 of 9

SHEET SIZE A3



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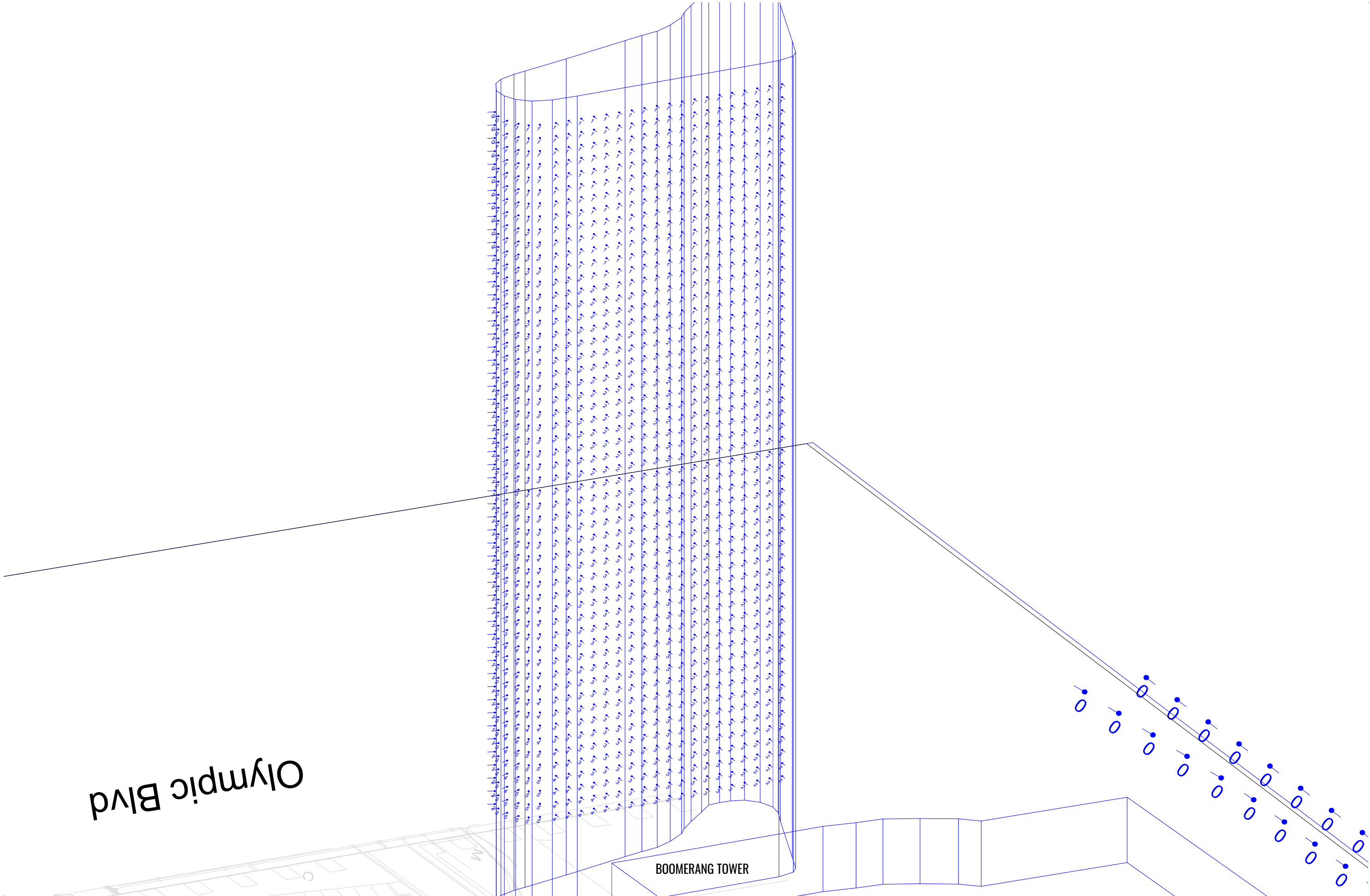


PROJECT

TOM WILLS OVAL
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DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 4 of 9

SHEET SIZE A3



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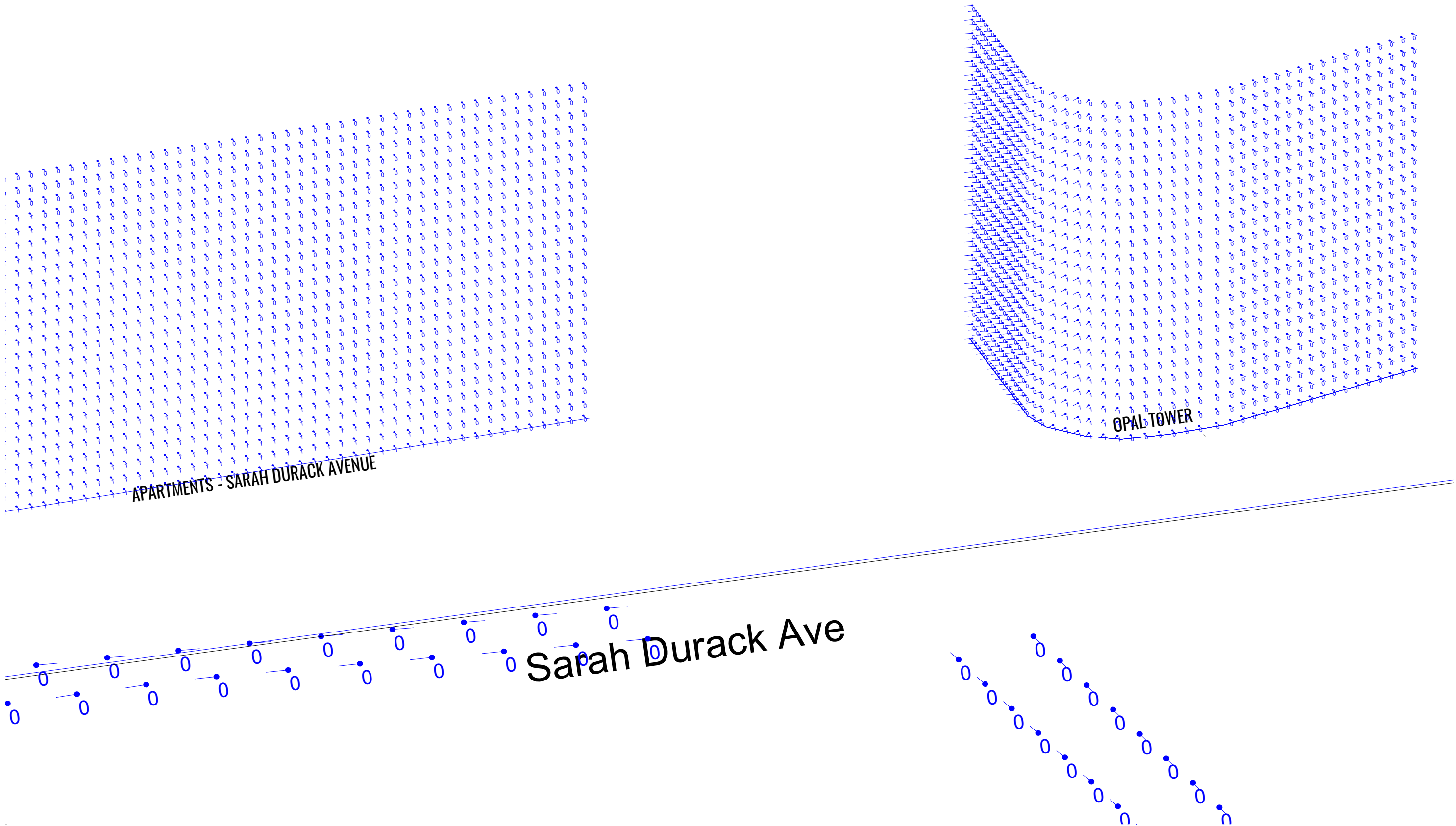


PROJECT

TOM WILLS OVAL
500LX

DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 5 of 9

SHEET SIZE A3



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PROJECT

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500LX

DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 6 of 9

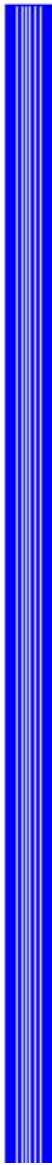
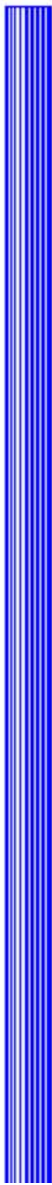
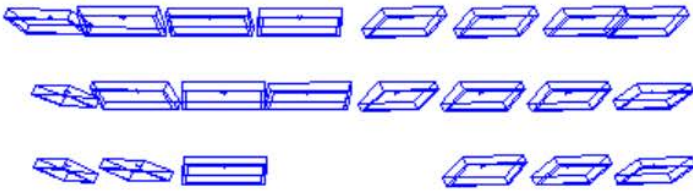
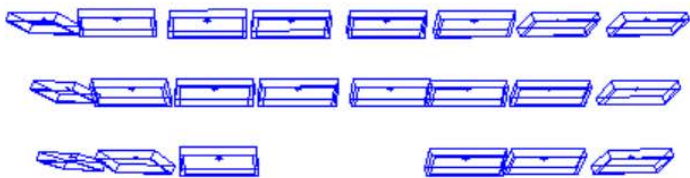
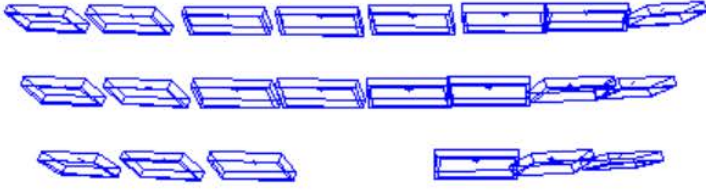
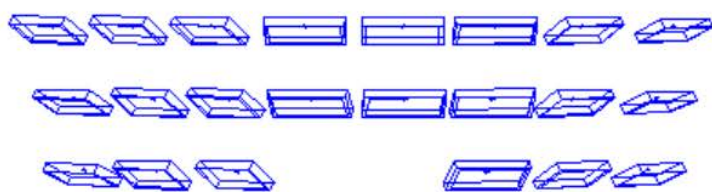
SHEET SIZE A3

POLE 1

POLE 2

POLE 3

POLE 4



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PROJECT

TOM WILLS OVAL
500LX

DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 7 of 9

SHEET SIZE A3

Luminaire Schedule						
Scenario: Tom Wills Oval						
Symbol	Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts
	88	FL1	VAILO ZENITH GEN-V F30 5700K CRI80 1500W LED SPORTS FLOODLIGHT (A201540B)	0.910	160125	1500

Calculation Summary							
Scenario: Tom Wills Oval							
Label	Units	Avg	Min	Max	Min/ Avg	Min/ Max	UG
001 PPA (Eh)	Lux	529	401	655	0.76	0.61	1.18

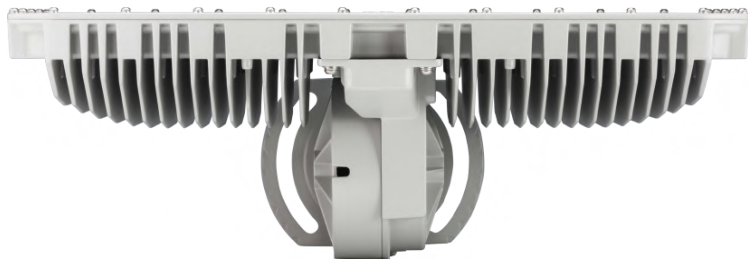
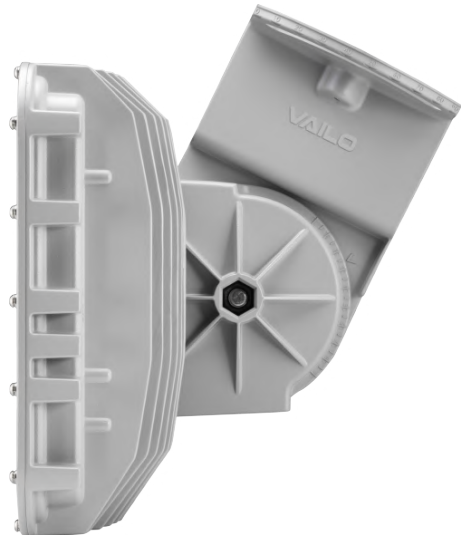
Glare Calculations			
Scenario: Tom Wills Oval			
Label	CalcType	Obs Label	Max
04 Glare Ratings	Glare Rating	Obs 01	47
04 Glare Ratings	Glare Rating	Obs 02	45
04 Glare Ratings	Glare Rating	Obs 03	31
04 Glare Ratings	Glare Rating	Obs 04	46
04 Glare Ratings	Glare Rating	Obs 05	30
04 Glare Ratings	Glare Rating	Obs 06	40
04 Glare Ratings	Glare Rating	Obs 07	38
04 Glare Ratings	Glare Rating	Obs 08	25
04 Glare Ratings	Glare Rating	Obs 09	39
04 Glare Ratings	Glare Rating	Obs 10	29
04 Glare Ratings	Glare Rating	Obs 11	32

NOTES:
CONCEPT DESIGN ONLY. DIMENSIONS ARE FROM CLIENT SUPPLIED "GWSTF_AR-16-0101 - PROPOSED SITE PLAN.DWG". POLE LOCATIONS AND DIMENSIONS MAY NOT BE ACCURATE ONLY THE PROVISION OF ACCURATELY SURVEYED OR AS BUILT CAD DRWAINGS WILL CONFRIM POLE LOCATIONS, DIMENSIONS AND LUMINAIRE AIMING INFORMATION. TOWER GROUND LEVEL BASE IS ASSUMED TO BE ON THE SAME RL THROUGHOUT.

LIGHTING DESIGN HAS AN OVERAL LLF (LIGHT LOSS FACTOR) OF 0.91 APPLIED, THE LFF TAKES INTO ACCOUNT LED LAMP LUMEN DEPRECIATION AT END OF USEFUL LIFE AND MAINTENANCE / CLEANING OF LUMINAIRES. THEREFORE CALCUALTED LEVELS SHOWN WILL BE 9% LOWER THAN WHAT WILL BE PHYSICALLY MEASURED ON THE GROUND AT TIME OF INITIAL INSTALL.

LIGHTING DESIGN COMPLIANT TO AS4282:2023, ZONE A3 - MEDIUM DISTRICT BRIGHTNESS, NON-CURFEW L1. OBTRUSIVE LIGHTING CALCULATION REPORT INCLUDES LED DISPLAY

LIGHTING DESIGN COMPLIANT TO AS2560:2021, TABLE 2.6.1 - LTP'S FOR FOOTBALL, PROFESSIONAL COMPETITION



1. COMPLIANCE REPORT GENERATED WITH A LLF OF 1.0
2. COMPLIANCE REPORT GENERATED WITH ALL LUMINAIRES AND LED DISPLAY TURNED ON

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A3 - Medium District Brightness, Non-Curfew L1
Filename: 030A Tom Wills Oval - GWS Giants - 500 Lux 35m - Screen
5/09/2024 4:16:55 PM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (27):

Calculation Label	Test Results	Max. Illum.
11 Southern Creek Area_III_Seg1	PASS	10
10 Lake Belvedere_III_Seg1	PASS	1
07 Sarah Durak Ave 200-300_III_Seg1	PASS	1
08 Opal Tower 200-300_III_Seg1	PASS	0
08 Opal Tower 200-300_III_Seg2	PASS	0
08 Opal Tower 200-300_III_Seg3	PASS	1
08 Opal Tower 200-300_III_Seg4	PASS	1
08 Opal Tower 200-300_III_Seg5	PASS	0
08 Opal Tower 200-300_III_Seg6	PASS	0
05 Boomerang Tower 50-100_III_Seg1	PASS	0
05 Boomerang Tower 50-100_III_Seg2	PASS	0
05 Boomerang Tower 50-100_III_Seg3	PASS	0
05 Boomerang Tower 50-100_III_Seg4	PASS	2
05 Boomerang Tower 50-100_III_Seg5	PASS	3
05 Boomerang Tower 50-100_III_Seg6	PASS	5
05 Boomerang Tower 50-100_III_Seg7	PASS	5
05 Boomerang Tower 50-100_III_Seg8	PASS	5
05 Boomerang Tower 50-100_III_Seg9	PASS	5
05 Boomerang Tower 50-100_III_Seg10	PASS	4
06 Boomerang Tower 100-200_III_Seg1	PASS	3
09 Opal Tower 300+_III_Seg1	PASS	0
09 Opal Tower 300+_III_Seg2	PASS	0
09 Opal Tower 300+_III_Seg3	PASS	0
09 Opal Tower 300+_III_Seg4	PASS	0
09 Opal Tower 300+_III_Seg5	PASS	0
09 Opal Tower 300+_III_Seg6	PASS	0
09 Opal Tower 300+_III_Seg7	PASS	0

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 12500 Cd

Calculations Tested (27):

Calculation Label	Test Results
11 Southern Creek Area_Cd_Seg1	PASS
10 Lake Belvedere_Cd_Seg1	PASS
07 Sarah Durak Ave 200-300_Cd_Seg1	PASS
08 Opal Tower 200-300_Cd_Seg1	PASS
08 Opal Tower 200-300_Cd_Seg2	PASS
08 Opal Tower 200-300_Cd_Seg3	PASS
08 Opal Tower 200-300_Cd_Seg4	PASS
08 Opal Tower 200-300_Cd_Seg5	PASS
08 Opal Tower 200-300_Cd_Seg6	PASS
05 Boomerang Tower 50-100_Cd_Seg1	PASS
05 Boomerang Tower 50-100_Cd_Seg2	PASS
05 Boomerang Tower 50-100_Cd_Seg3	PASS
05 Boomerang Tower 50-100_Cd_Seg4	PASS
05 Boomerang Tower 50-100_Cd_Seg5	PASS
05 Boomerang Tower 50-100_Cd_Seg6	PASS
05 Boomerang Tower 50-100_Cd_Seg7	PASS
05 Boomerang Tower 50-100_Cd_Seg8	PASS
05 Boomerang Tower 50-100_Cd_Seg9	PASS
05 Boomerang Tower 50-100_Cd_Seg10	PASS
06 Boomerang Tower 100-200_Cd_Seg1	PASS
09 Opal Tower 300+_Cd_Seg1	PASS
09 Opal Tower 300+_Cd_Seg2	PASS
09 Opal Tower 300+_Cd_Seg3	PASS
09 Opal Tower 300+_Cd_Seg4	PASS
09 Opal Tower 300+_Cd_Seg5	PASS
09 Opal Tower 300+_Cd_Seg6	PASS
09 Opal Tower 300+_Cd_Seg7	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (8):

Calculation Label	Adaptation Luminance	Test Results
Australia Ave Sth_TI_1	1	PASS
Shirley Strickland Ave East_TI_7	1	PASS
Shirley Strickland Ave West_TI_6	1	PASS
Olympic Blvd Sth_TI_4	1	PASS
Olympic Blvd Nth_TI_3	1	PASS
Sarah Durack Ave East_TI_6	1	PASS
Sarah Durack Ave West_TI_5	1	PASS
Australia Ave Nth_TI_2	1	PASS

Upward Waste Light Ratio (UWLR)

Maximum Allowable Value: 2.0 %

Calculated UWLR: 1.2 %

Test Results: PASS



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500LX

DESIGNED	GD	CHECKED	SHEET SIZE A3
DATE	5/09/2024	SCALE	
REVISION	REVISION 017.030A	Page 8 of 9	

Luminaire Location Summary							
Scenario: Tom Wills Oval							
			Insertion Point				
LumNo	Label	Pole	X	Y	Z	Orient	Tilt
1	FL1	Pole 1	-52.438	61.237	33.6	242.832	24
2	FL1	Pole 1	-52.382	60.319	35	244.967	33.4
3	FL1	Pole 1	-52.317	60.748	34.3	245.052	28
4	FL1	Pole 1	-51.695	61.22	33.6	245.028	35.7
5	FL1	Pole 1	-51.549	60.341	35	245.378	35
6	FL1	Pole 1	-51.553	60.855	34.3	245.328	35.8
7	FL1	Pole 1	-50.882	61.337	33.6	245.811	37.8
8	FL1	Pole 1	-50.774	60.883	34.3	245.878	36.6
9	FL1	Pole 1	-50.729	60.412	35	246.086	35.7
10	FL1	Pole 1	-50.038	61.173	34.3	283.364	34.2
11	FL1	Pole 1	-49.905	60.755	35	290.896	33.7
12	FL1	Pole 1	-49.229	61.549	34.3	298.412	36
13	FL1	Pole 1	-49.042	61.108	35	293.92	34.2
14	FL1	Pole 1	-48.685	62.272	33.6	318.203	38.8
15	FL1	Pole 1	-48.471	61.928	34.3	302.896	36.3
16	FL1	Pole 1	-48.281	61.564	35	299.034	35.1
17	FL1	Pole 1	-48.085	62.894	33.6	345.305	31.2
18	FL1	Pole 1	-47.849	62.437	34.3	343.176	32
19	FL1	Pole 1	-47.583	62.056	35	340.777	32
20	FL1	Pole 1	-47.542	63.485	33.6	351.081	22.4
21	FL1	Pole 1	-47.25	63.074	34.3	350.119	21
22	FL1	Pole 1	-46.904	62.651	35	347.334	24.5

Luminaire Location Summary							
Scenario: Tom Wills Oval							
			Insertion Point				
LumNo	Label	Pole	X	Y	Z	Orient	Tilt
23	FL1	Pole 2	69.036	47.278	35	171.818	30
24	FL1	Pole 2	69.272	46.486	35	181.805	32
25	FL1	Pole 2	69.48	47.435	34.3	175.008	32
26	FL1	Pole 2	69.663	45.637	35	203.016	36
27	FL1	Pole 2	69.737	46.642	34.3	179.812	32
28	FL1	Pole 2	69.922	47.587	33.6	171.002	26
29	FL1	Pole 2	70.06	45.841	34.3	198.662	36
30	FL1	Pole 2	70.162	44.923	35	207.319	38
31	FL1	Pole 2	70.129	46.759	33.6	175.743	33
32	FL1	Pole 2	70.477	45.971	33.6	187.534	34
33	FL1	Pole 2	70.52	45.194	34.3	204.299	37
34	FL1	Pole 2	70.869	44.384	35	208.746	38.4
35	FL1	Pole 2	71.2	44.677	34.3	212.041	39
36	FL1	Pole 2	71.672	43.913	35	213.629	38.2
37	FL1	Pole 2	71.908	44.284	34.3	217.634	38.5
38	FL1	Pole 2	72.127	44.609	33.6	220.94	38.3
39	FL1	Pole 2	72.468	43.561	35	223.919	33.6
40	FL1	Pole 2	72.673	43.92	34.3	251.631	26
41	FL1	Pole 2	72.861	44.29	33.6	260.105	25
42	FL1	Pole 2	73.441	43.405	35	265.324	22
43	FL1	Pole 2	73.507	43.811	34.3	267.149	18
44	FL1	Pole 2	73.728	44.135	33.6	269.203	13

Luminaire Location Summary							
Scenario: Tom Wills Oval							
			Insertion Point				
LumNo	Label	Pole	X	Y	Z	Orient	Tilt
45	FL1	Pole 3	76.81	-44.215	33.6	91.306	15
46	FL1	Pole 3	76.491	-43.986	34.3	94.433	23
47	FL1	Pole 3	76.257	-43.601	35	100.455	23
48	FL1	Pole 3	75.982	-44.502	33.6	107.459	27
49	FL1	Pole 3	75.663	-44.273	34.3	138.44	35.6
50	FL1	Pole 3	75.382	-45.128	33.6	149.492	40
51	FL1	Pole 3	75.374	-43.953	35	148.562	38.3
52	FL1	Pole 3	75.062	-44.899	34.3	154.475	40
53	FL1	Pole 3	74.741	-44.643	35	152.205	39
54	FL1	Pole 3	74.54	-45.574	34.3	156.039	38
55	FL1	Pole 3	74.182	-45.296	35	155.25	38
56	FL1	Pole 3	74.052	-47.235	33.6	161.347	36
57	FL1	Pole 3	74.025	-46.353	34.3	158.16	37
58	FL1	Pole 3	73.785	-47.985	33.6	168.271	34
59	FL1	Pole 3	73.678	-48.932	33.6	185.73	29
60	FL1	Pole 3	73.663	-47.036	34.3	159.172	36
61	FL1	Pole 3	73.645	-46.101	35	156.537	37
62	FL1	Pole 3	73.397	-47.841	34.3	165.912	34
63	FL1	Pole 3	73.25	-48.763	34.3	182.72	30
64	FL1	Pole 3	73.243	-46.885	35	163.169	35
65	FL1	Pole 3	72.98	-47.707	35	181.507	30
66	FL1	Pole 3	72.835	-48.65	35	184.311	28

Luminaire Location Summary							
Scenario: Tom Wills Oval							
			Insertion Point				
LumNo	Label	Pole	X	Y	Z	Orient	Tilt
67	FL1	Pole 4	-31.408	-64.052	35	39.009	25.9
68	FL1	Pole 4	-31.665	-64.58	34.3	13.557	20.7
69	FL1	Pole 4	-31.744	-64.973	33.6	10.819	23
70	FL1	Pole 4	-32.065	-63.873	35	63.201	36
71	FL1	Pole 4	-32.261	-64.235	34.3	53.713	34
72	FL1	Pole 4	-32.364	-64.697	33.6	18.306	20
73	FL1	Pole 4	-32.827	-63.486	35	70.221	34
74	FL1	Pole 4	-33.027	-63.879	34.3	79.401	34
75	FL1	Pole 4	-33.107	-64.273	33.6	82.962	34
76	FL1	Pole 4	-33.615	-63.166	35	84.624	32
77	FL1	Pole 4	-33.775	-63.621	34.3	88.797	33
78	FL1	Pole 4	-34.55	-62.918	35	121.613	36
79	FL1	Pole 4	-34.589	-63.43	34.3	127.005	35.5
80	FL1	Pole 4	-35.368	-63.292	34.3	121.525	37.5
81	FL1	Pole 4	-35.401	-62.798	35	121.024	37.5
82	FL1	Pole 4	-35.457	-63.674	33.6	121.857	38
83	FL1	Pole 4	-36.184	-63.257	34.3	122.898	36.5
84	FL1	Pole 4	-36.237	-62.745	35	122.256	36
85	FL1	Pole 4	-36.272	-63.639	33.6	129.047	34.1
86	FL1	Pole 4	-36.773	-62.527	35	122.399	36
87	FL1	Pole 4	-36.961	-63.18	34.3	129.556	29.3
88	FL1	Pole 4	-37.049	-63.563	33.6	129.4	28.4



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DESIGNED	GD	CHECKED
DATE	5/09/2024	SCALE
REVISION	REVISION 017.030A	Page 9 of 9

SHEET SIZE A3